

# Technical training.

## Product information.

### E82/E88 LCI



**BMW Service**

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**BMW Group University**  
**Technical Training**

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# General information

## Symbols used

The following symbol is used in this document to facilitate better comprehension or to draw attention to very important information:



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Contains important safety information and information that needs to be observed strictly in order to guarantee the smooth operation of the system.

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## Information status and national-market versions

BMW Group vehicles meet the requirements of the highest safety and quality standards. Changes in requirements for environmental protection, customer benefits and design render necessary continuous development of systems and components. Consequently, there may be discrepancies between the contents of this document and the vehicles available in the training course.

This document basically relates to the European version of left hand drive vehicles. Some operating elements or components are arranged differently in right-hand drive vehicles than shown in the graphics in this document. Further differences may arise as the result of the equipment specification in specific markets or countries.

## Additional sources of information

Further information on the individual topics can be found in the following:

- Owner's Handbook
- Integrated Service Technical Application.

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The information contained in this document forms an integral part of the technical training provided by the BMW Group and is intended for its course trainers and participants. Refer to the latest relevant information systems of the BMW Group for any changes/additions to the Technical Data.

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# **E82/E88 LCI**

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# **E82/E88 LCI**

## **1. Introduction.**

### **1.1. General information**

The BMW 1 Series Coupe and Convertible have been available since March of 2008. As of March 2011 production, the 1 Series Coupe and Convertible will undergo a redesign in order to maintain its leading position in the market and to fend off the ever increasing number of competitors.

This model revision, known as LCI (Life Cycle Impulse), includes a pronounced visual upgrade at the front and rear plus improvements to details and equipment levels.

This document is intended to provide a basic understanding of the changes to the 1 series LCI.

# E82/E88 LCI

## 2. Body.

### 2.1. Exterior design

#### 2.1.1. Front view

The new front end of the E82 LCI and E88 LCI is distinguished by the following features:



Front view of E82/E88 LCI

Index	Explanation
1	Front bumper trim has been redesigned in terms of function and technical design
2	Central grille with black styling bar
3	Redesigned front fog lights
4	Vertical outer air scoops (128i coupe and convertible only)
5	Redesigned headlights

# E82/E88 LCI

## 2. Body.

### 2.1.2. Rear view

The rear of the E82 LCI and E88 LCI is distinguished by the redesign of the rear tail light cluster.



TG10-1387

Rear view of E82 LCI

Index	Explanation
1	Rear light cluster retains the same external dimensions but has a new housing and lens

# E82/E88 LCI

## 2. Body.

### 2.1.3. Side view

The side view of the E82 LCI and E88 LCI remains unchanged from the previous models. However, there are two new body colors, Vermillion Red Metallic (SA A82) and Marrakesh Brown Metallic (SA B09).

The base wheel sizes have increased by 1" to enhance the dynamic nature of the vehicle to 17" wheels on the 128i models and 18" wheels on the 135i models. New wheel designs are also available including an aero wheel shown below.



Side view of E88 LCI with Aero wheel

### 2.2. Interior design

#### 2.2.1. Cockpit

The elegant cockpit with its typical BMW design has been further upgraded by the high quality and harmony of the materials used.

Both Coupe and Convertible 135i models receive standard power seats with adjustable lumbar support.

The light switch cluster and the heating and air conditioning controls have been carried over from the E9x.

All convertibles will receive a standard through-loading system for improved storage capacity.

The iPod/USB Adapter is now standard on all E82/E88 LCI models.

# E82/E88 LCI

## 3. Improved Aerodynamics.

### 3.1. Handling dynamics

From an aerodynamics viewpoint, the E82/E88 LCI incorporates the following aerodynamic features:

- AirCurtain integrated in the front bumper. Only available on the 128i E82/E88 .
- Aerodynamic kit standard on the 135i E82/E88
- Optional "Streamline" 17" aero wheels (SA 2AP). These are directional wheels and are specific to the different direction of rotation on each side of the car. Only available on the 128i E82/E88 .

These features produce positive effects on fuel consumption and CO<sub>2</sub> emission and represent measurable EfficientDynamics attributes.

In addition to those two measures, the front bumper has been further aerodynamically optimized in this model revision. The effect of that is to enable achievement of a perfect combination of low aerodynamic drag coefficient Cd and optimum engine and component cooling. Carefully positioned air scoops in the front bumper ensure that cooling system components such as radiator, intercooler and discrete oil cooler are provided with the optimum air flow for cooling.

# E82/E88 LCI

## 3. Improved Aerodynamics.

### 3.1.1. AirCurtain

The AirCurtain is an aerodynamic feature created by an air scoop in the outer area of the front bumper leading to a slit-shaped outlet inside the front wheel arch.

The AirCurtain accelerates high-energy air flow to create a curtain of air that protects the wheel arch from air turbulence at the side, thereby reducing the car's aerodynamic drag. The overall improvement is approx.  $\Delta C_d = -0.003$ .



AirCurtain on 128i E82/E88 LCI

At present there are no competitors offering a similar feature in this class of vehicle.

# E82/E88 LCI

## 3. Improved Aerodynamics.

### 3.1.2. Aero wheels (SA 2AP)

The primary aim of the aero wheels is to reduce the rotational resistance created by the air displacement effect of the spokes. With a typical 17-inch wheel, as much as 2 bhp of engine power can be lost at a speed of 155 mph. The power loss is equivalent to ( $\Delta C_d = 0.004$ ).



TG10-1706

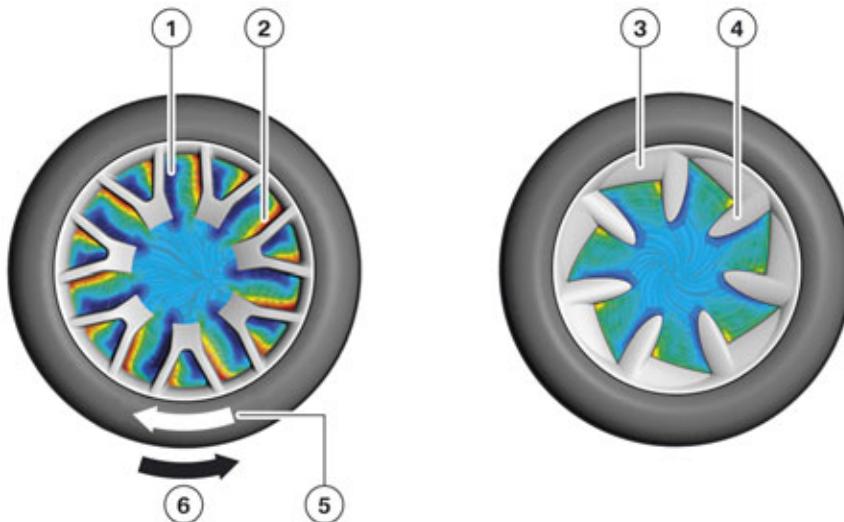
Left "Streamline" aero wheel for 128i E82/E88 LCI

# E82/E88 LCI

## 3. Improved Aerodynamics.

### 3.1.3. Principle of the aero wheel

The aero wheel reduces the pressure difference between the front and back of the spokes.



TG10-1707

Principle of the aero wheel

Index	Explanation
1	Low pressure
2	High pressure
3	Reduced turbulence in the area of the side faces
4	Spoke shaping reduces spoke wash
5	Resisting force
6	Direction of rotation when travelling to the left

# E82/E88 LCI

## 4. Body Electrical/Electronics.

### 4.1. Exterior lights

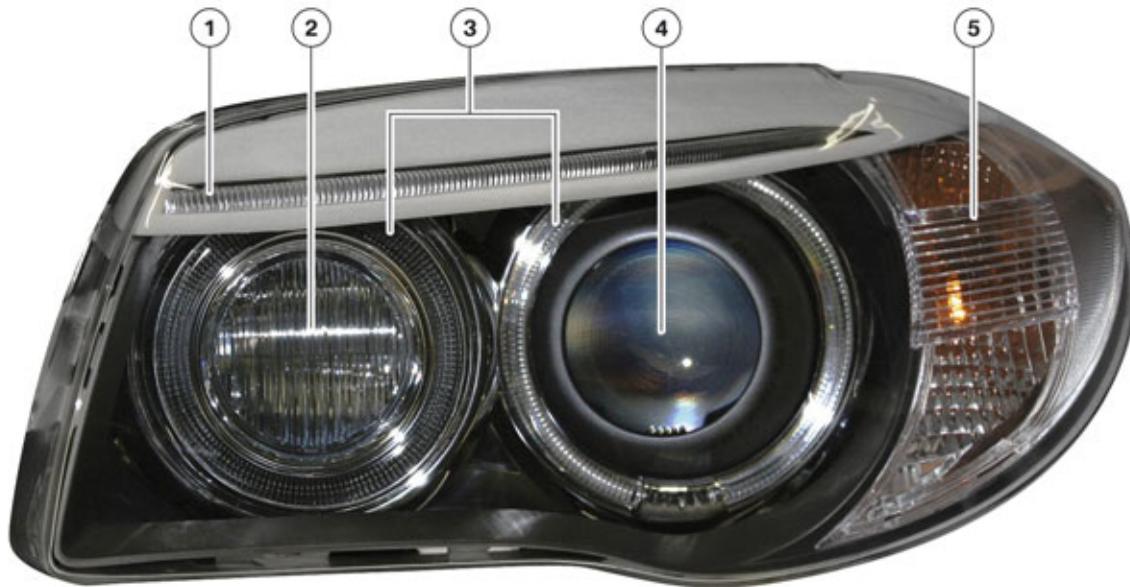
#### 4.1.1. Headlights

The headlights on the E82/E88 LCI incorporate the white LED "Razorlight" styling light for the first time in this configuration. The Razorlight merges directly into the wave guide and ensures a high level of visibility on the road.

The 128i coupe and convertible can be ordered with optional bi-xenon headlights (SA 522) and AHL adaptive headlights (SA 524). The 135i coupe and convertible will have bi-xenon headlights and AHL adaptive headlights as standard.

The LED "Razorlight" styling light is only included with bi-xenon headlights (SA 522) and adaptive headlights (SA 524).

As standard, the 128i coupe and convertible is fitted with halogen headlights.



E82/E88 LCI bi-xenon headlight

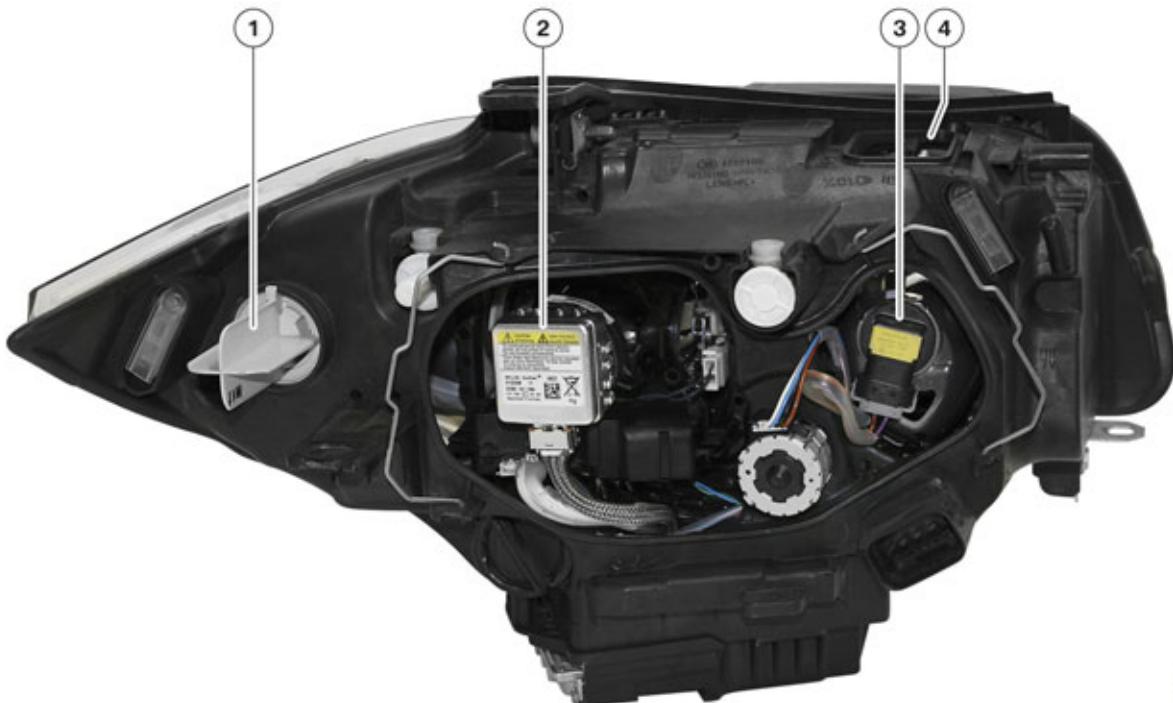
Index	Explanation
1	LED styling light (Razorlight)
2	Parking light (cornering light with option SA 524 adaptive headlights)
3	Daytime light, parking light rings
4	Dipped beam headlight, main beam headlight, headlight flasher (with option SA 522 bi-xenon headlights)
5	Turn indicator

# E82/E88 LCI

## 4. Body Electrical/Electronics.

### 4.1.2. Rear of headlight unit

On the back of the headlight unit there is access to the various lights.



TG10-1536

Rear of bi-xenon headlight unit on E82/E88 LCI

Index	Explanation
1	Turn indicator lamp
2	Bi-xenon headlight lamp
3	Lamp for side light/daytime light
4	Lamp for styling light (Razorlight)

Information on changing the bulbs in the various lights is provided in the Owner's Manual for the vehicle and in the repair instructions.

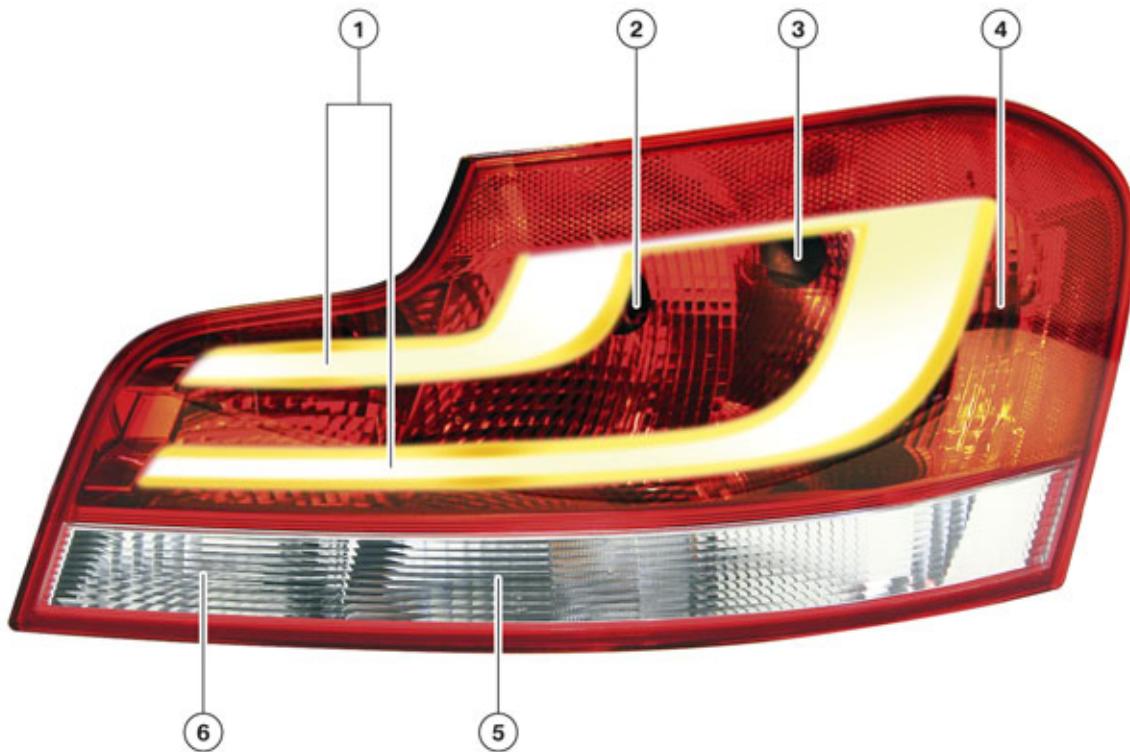
# E82/E88 LCI

## 4. Body Electrical/Electronics.

### 4.1.3. Rear lights

The rear light units retain the typical BMW L-shape as on the E9x LCI and the F10/F07 and F01 models and are in the form of continuous LED elements.

Rear taillight units using LED technology combined with fiber optics for distributing the light are available only if the vehicle is equipped with xenon headlights.



High-spec rear light unit for E82/E88

TG10-1703

Index	Explanation
1	LED light strips for tail light
2	Brake light 1
3	Brake light 2
4	Tail light (brake force display)
5	Turn indicator
6	Reversing light

As standard, the 128i E82/E88 LCI is fitted with the low-spec rear light assembly. Conventional bulbs are used for all rear light applications.

# E82/E88 LCI

## 4. Body Electrical/Electronics.



Low-spec rear light unit for 128i E82/E88

TG10-1390

Index	Explanation
1	Brake light 1 / tail light
2	Brake light 2 / tail light
3	Tail light (brake force display)
4	Turn indicator
5	Reversing light

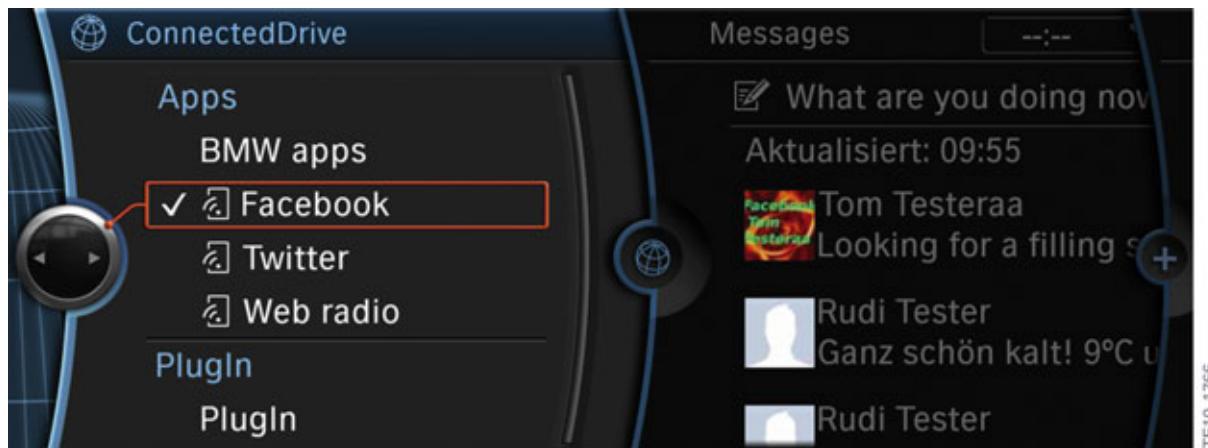
# E82/E88 LCI

## 4. Body Electrical/Electronics.

### 4.2. Apps

Starting in March 2011, a new option (SA 6NR), "Apps", will be available in combination with the familiar BMW navigation system (SA 609) and BMW assist with Bluetooth (SA 639) on the E82/E88 LCI.

BMW "Apps" includes, Facebook, Twitter and Web radio. A detailed description of the option (SA 6NR) can be found in BMW "Apps/ConnectedDrive" training material.



Option SA 6NR "Apps"



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